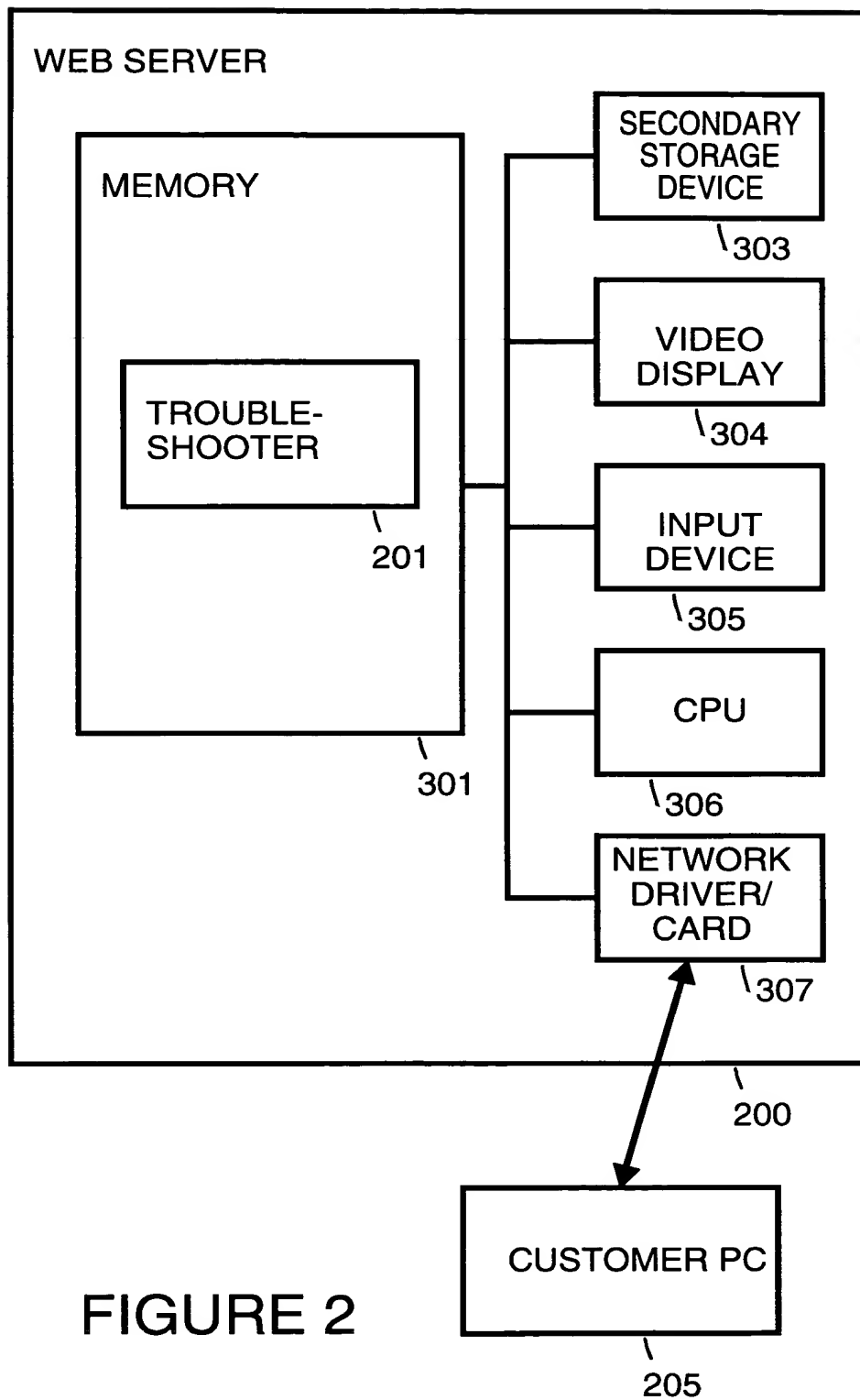


FIGURE 1

## WEB SERVER



## FIGURE 2

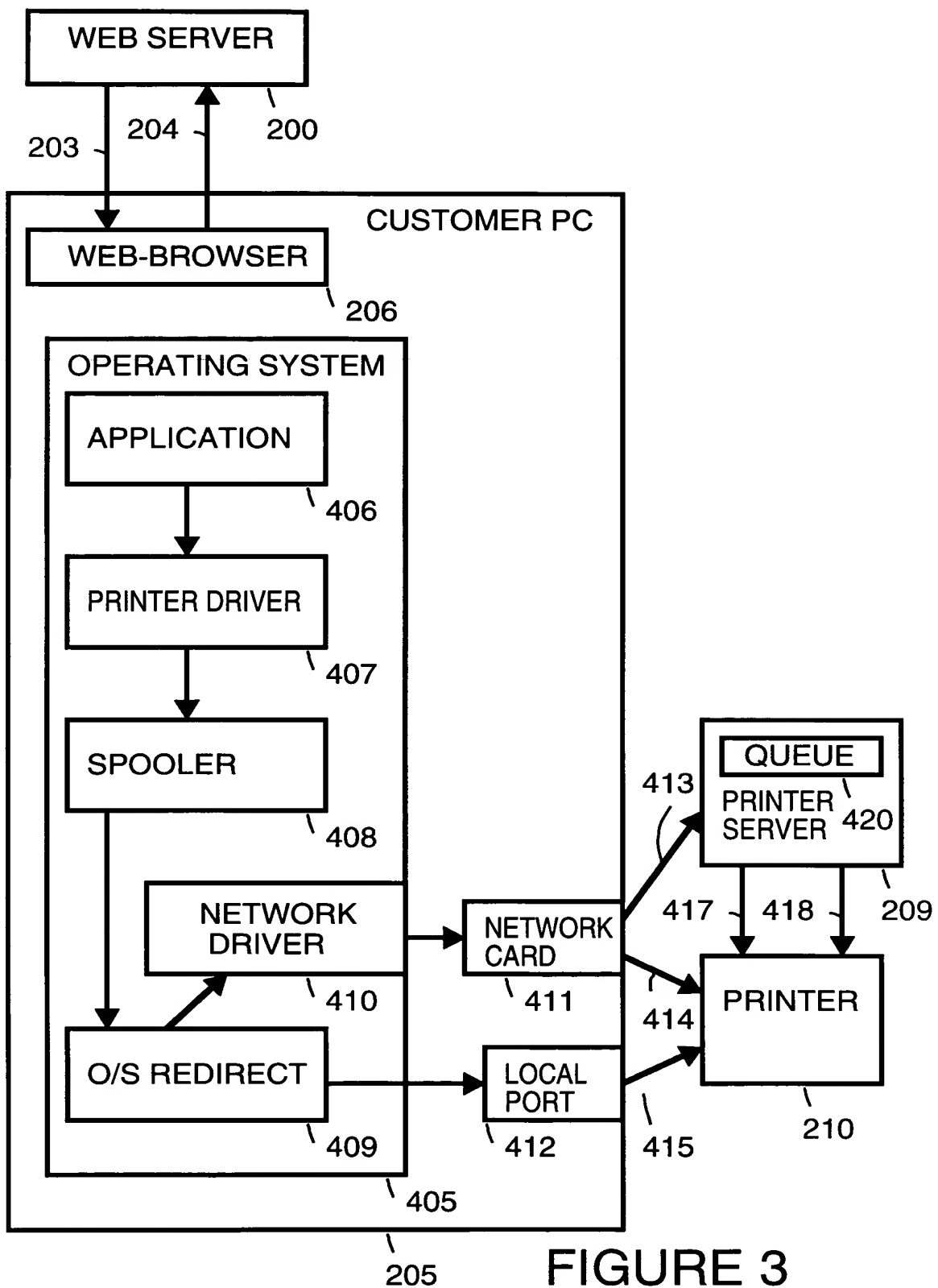


FIGURE 3

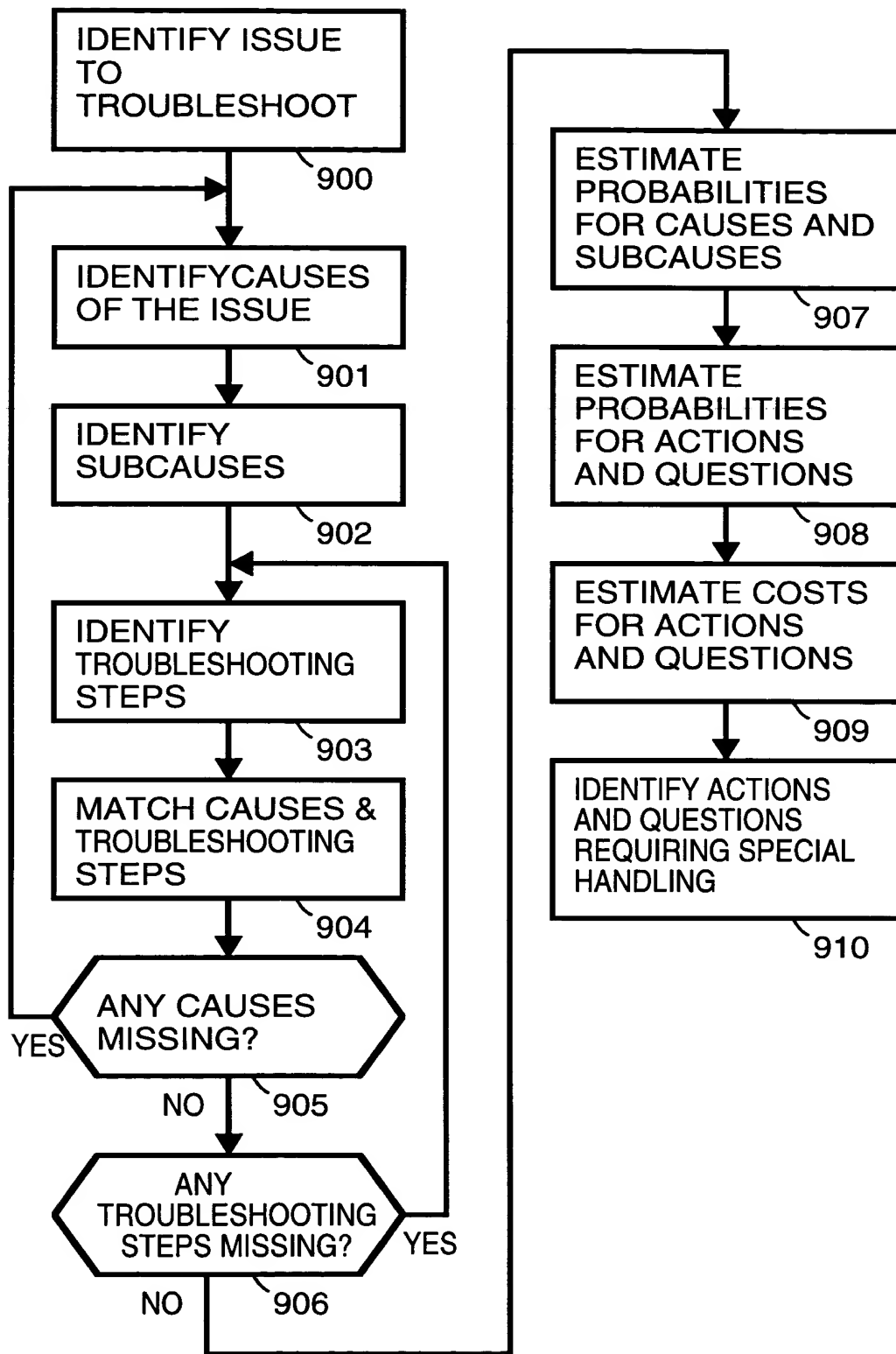


FIGURE 4

# Main window

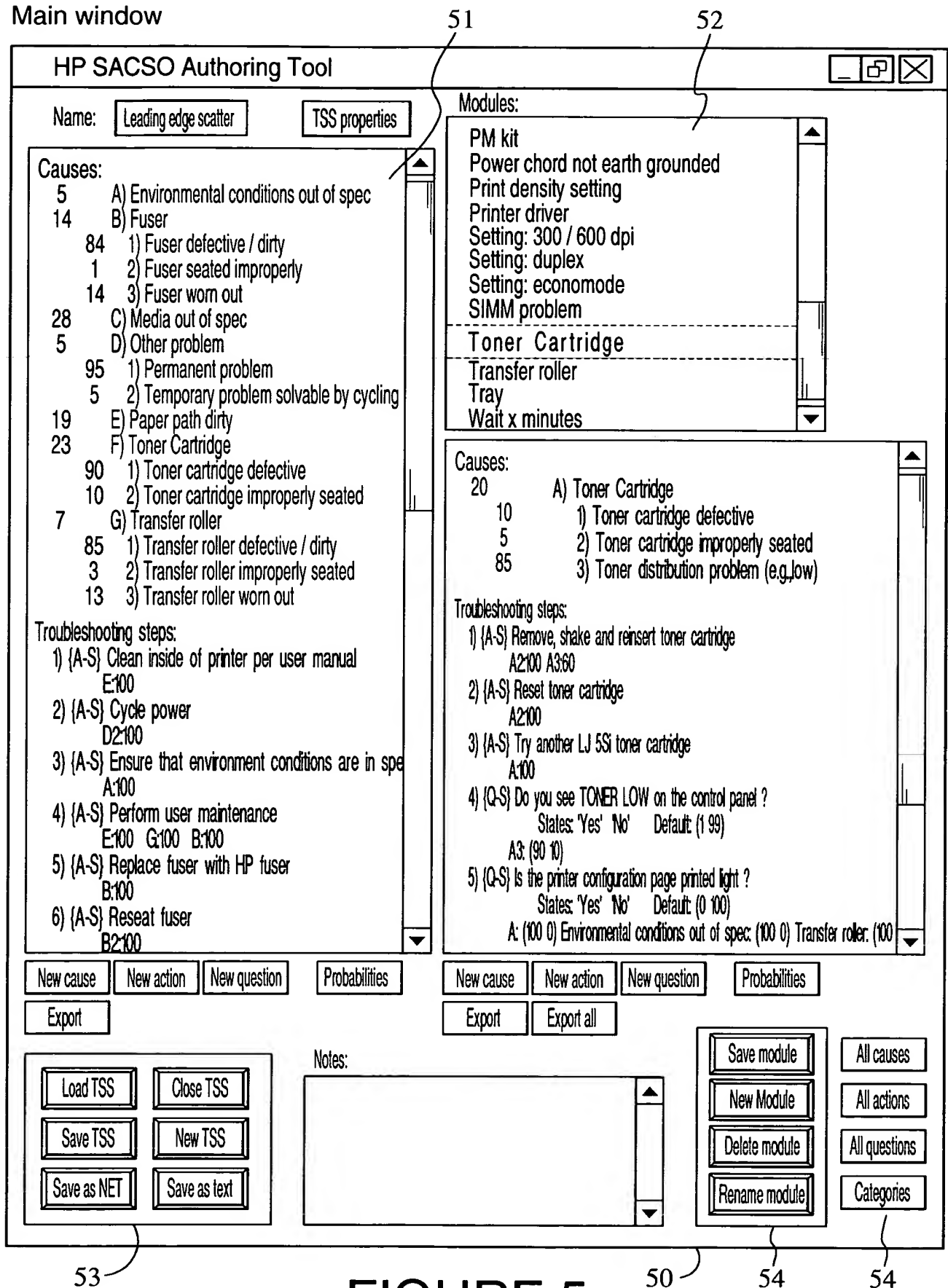


FIGURE 5

# Cause editor

**Cause Editor** [X]

Name:  61

62 ☐ Subcause of:  61

Probability:  63

64

65

66 ☒ This cause is a consumable (toner cartridge, fuser, transfer roller or feed and separation rollers).

67 ☐ Automatic data collection possible.

68 ☐ Can be fixed by rebooting the PC.

69 ☐ Can be fixed by power cycling the printer.

Dependency of environment:

|                        |
|------------------------|
| Printer                |
| Operating system       |
| Printer driver         |
| Network                |
| Paper handling devices |

 78

Name of cause given to customers:

79

77

60

FIGURE 6

# Cause probability editor

Cause Probability Editor

Select level and causes:

- Environmental conditions out of spec
- Fuser
- Fuser defective / dirty
- Fuser seated improperly
- Fuser worn out
- Media out of spec
- Other problem
- Permanent problem
- Temporary problem solvable by cycling
- Paper path dirty
- Toner Cartridge
- Toner cartridge defective
- Toner cartridge improperly seated

Set probabilities:

|                         |       |
|-------------------------|-------|
| Fuser defective / dirty | 84.29 |
| Fuser seated improperly | 1.429 |
| Fuser worn out          | 14.29 |

Normalize

OK Cancel

71

72

70

FIGURE 7

Cause category editor

Categories of cause

Select categories that the cause falls into:

- Operating System
- Consumables
- Driver
- Customer Expectat
- Printer
- Software
- Cables
- Settings
- Network
- Hardware
- Application
- Environment

OK Cancel

80

FIGURE 8



# Action editor

Action Editor

Name:  
Perform user maintenance

Type:  
Solution action  
Information gathering action

92

Causes "solved" by the action:  
Paper path dirty  
Transfer roller  
Fuser

99

Add cause  
Remove cause

With probability:  
100  
100  
100

93  
94  
☐ Action is forced as number: 0  
☐ Workaround.

96  
95  
97  
Edit costs, ...  
Explanation  
Extra Information

☐ Reverse action - tests a single component in different environment  
Probability that it works if none of the above causes are present: 0

90

Remove action

98

OK Cancel

FIGURE 9

# Extra information editor for actions

**Extra information for actions**

**Perform user maintenance**

This action includes the following actions:

- Clean inside of printer per user manual
- Reseat fuser
- Reseat transfer roller

Add actions Remove actions

This action is mutually exclusive with the following actions:

Add actions Remove actions

☒ This action can only be performed after a specific question has been answered.

Question: Is the user maintenance due? ▼

State: Yes ▼

☐ This action can only be performed after a specific question has been answered.

Question: Did you recently perform the user mainten ▼

State: Yes ▼

☐ If this action is performed, the following question should be fixed in the specified state.

Question: Did you recently perform the user mainten ▼

State: Yes ▼

☐ This action includes moving a component, and will also solve the problem if this component was seated improperly.

Component (seated improperly): ▼

☐ The component should not be moved back in place afterwards.

Dependency of environment:

- Printer
- Operating system
- Printer driver
- Network
- Paper handling devices

☒ This action includes power cycling the printer.

☐ This action includes rebooting the customer's PC.

☐ This action is irreversible.

☐ Automatic data collection possible.

OK Cancel

100 101 102 103 104 105 106 107 108 109 118 119

FIGURE 10

Action probability editor

Probability of action ☐

Assuming that

is the only cause of

what is the probability that correctly performing the step

will solve the problem?

110

FIGURE 11

## General question editor

120 General question

121 Name: Did you recently perform the user maintenance?

122 States:

|     |    |
|-----|----|
| Yes | 8  |
| No  | 92 |

Add State

128 Normalize

126 Explanation

123 Edit costs, ...

124 Extra information

125

126

127 Remove question

Probability changes for causes:

- 5 Temporary problem solvable by cycling power
- 5 Environmental conditions out of spec
- 28 Media out of spec
- 7 Transfer roller
- 13 Transfer roller worn out
- 3 -> 25 Transfer roller improperly seated
- 85 Transfer roller defective / dirty
- 14 Fuser
- 14 Fuser worn out
- 84 Fuser defective / dirty
- 1 -> 15 Fuser seated improperly

Remove change

☐ Question is forced as number: 0

OK Cancel

FIGURE 12

## Probability change editor

Probability Change Editor

Question: Did you recently perform the user mail

Cause: Transfer roller improperly seated

State: Yes

Old probability: 2.5

New probability: 25

OK

Cancel

FIGURE 13

## Symptom question editor

**Symptom question**

Name: Is the printer configuration page printed light?

States:

- Yes
- No

Add State

Edit costs, ...

Explanation

Mutual exclusions

Causes:

- Toner cartridge
- Environmental conditions out of spec
- Transfer roller

Probabilities of states given the cause:

|     |   |
|-----|---|
| 100 | 0 |
| 100 | 0 |
| 100 | 0 |

Update Remove Add:

Probabilities of states if none of the specified causes are present:

Question is forced as number:

Remove question OK Cancel

# FIGURE 14

Cause editor for actions and questions

Cost Editor

Step: Perform user maintenance

Time: 25 (minutes) ☐ Idle time?

Risk: High

Money: 0

Insult: 0

Inaccuracy: Medium

OK Cancel

152 153 154 155 156 157 150 151

FIGURE 15

Explanation editor for causes, actions and questions

Explanation Editor

Toner cartridge

Explanation:

Note:

OK Cancel

161

162

FIGURE 16